2 - Search the Biospecimen Research Database

2 - Search the Biospecimen Research Database

This section introduces you to the procedures for searching the Biospecimen Research Database. It includes the following topics:

Search Overview

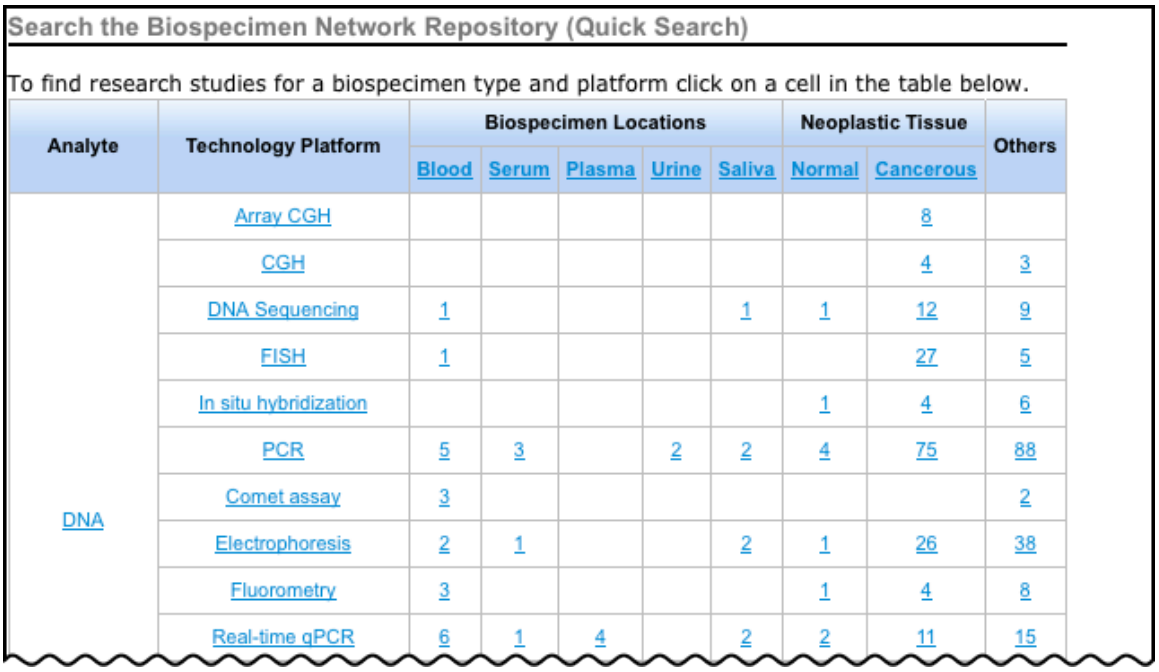
You can search the Biospecimen Research Database to find research studies and papers that match criteria you specify. You can search the Biospecimen Research Database in the following ways.

- Quick Search Overview
- Simple Search Overview
- Advanced Search Overview
- Experimental Factor Search Overview

> **Note**
> You do not need to log in or have an account to search the Biospecimen Research Database.

Quick Search Overview

A quick search presents common search criteria in a table format with links to search results. This is the default search method. For more information, see Conduct a Quick Search.



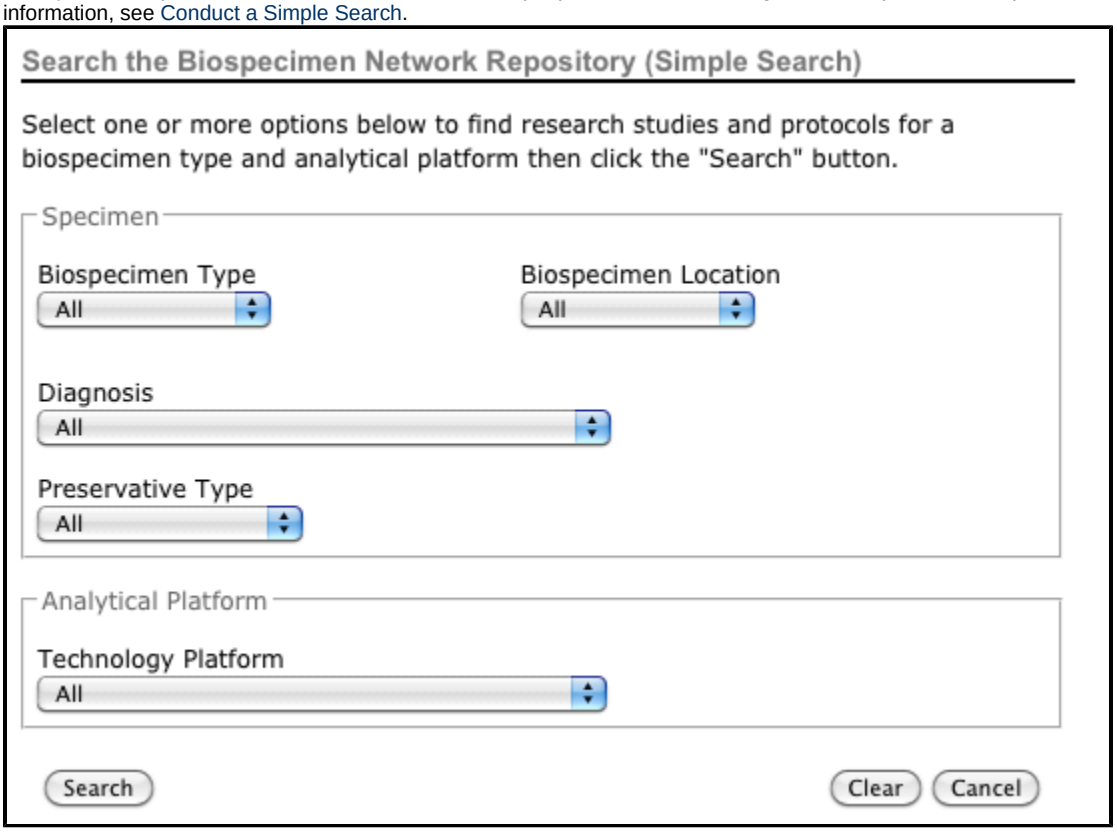
Search the Biospecimen Network Repository (Quick Search)

To find research studies for a biospecimen type and platform click on a cell in the table below.

Analyte	Technology Platform	Biospecimen Locations					Neoplastic Tissue		Others
		Blood	Serum	Plasma	Urine	Saliva	Normal	Cancerous	
DNA	Array CGH							8	
	CGH							4	3
	DNA Sequencing	1				1	1	12	9
	FISH	1						27	5
	In situ hybridization						1	4	6
	PCR	5	3		2	2	4	75	88
	Comet assay	3							2
	Electrophoresis	2	1			2	1	26	38
	Fluorometry	3					1	4	8
	Real-time qPCR	6	1	4		2	2	11	15

Simple Search Overview

A simple search presents common search criteria in a query format. The following is an example of the Simple Search page. For more information, see Conduct a Simple Search.



Advanced Search Overview

An advanced search includes all possible search criteria in a query format. For more information, see Conduct an Advanced Search.

Search the Biospecimen Network Repository (Advanced Search)

Specimen

Biospecimen Type

- Cell
- Fluid
- Tissue

Biospecimen Location

- Adipose
- Adrenal Gland
- Amniotic Fluid
- Aorta
- Appendix

Diagnosis

- AIDS/HIV-related
- Alzheimer's Disease
- Amyotrophic Lateral Sclerosis
- Arteriosclerosis
- Arthritis

Diagnosis Subcategory

- Benign
- Carcinoma
- Germ Cell
- Leukemia
- Lymphoma

Preservative Type

- Ethanol
- Formalin
- Frozen
- None (Fresh)
- OCT

Platform

Analyte

- Carbohydrate
- Cell count/volume
- DNA
- Electrolyte/Metal
- Gas

Technology Platform

- 1D/2D gels
- Antibody microarray
- Antiglobulin test
- Array CGH
- Atomic absorption spectroscopy

Author(s)

Enter the author's name(s) in the format of last name followed by first initial (first initial is optional). Separate authors' names by a comma. Examples: Smith J, Doe L

Paper Type

○ Review ○ Nonreview ◉ All

Experimental Factors

Classification

- Preaquisition
- Biospecimen Acquisition
- Biospecimen Aliquots and Compone
- Biospecimen Preservation
- Storage

Factor

- Aliquot sequential collection
- Aliquot size/volume
- Analyte isolation method
- Analyte purification
- Analytical algorithm

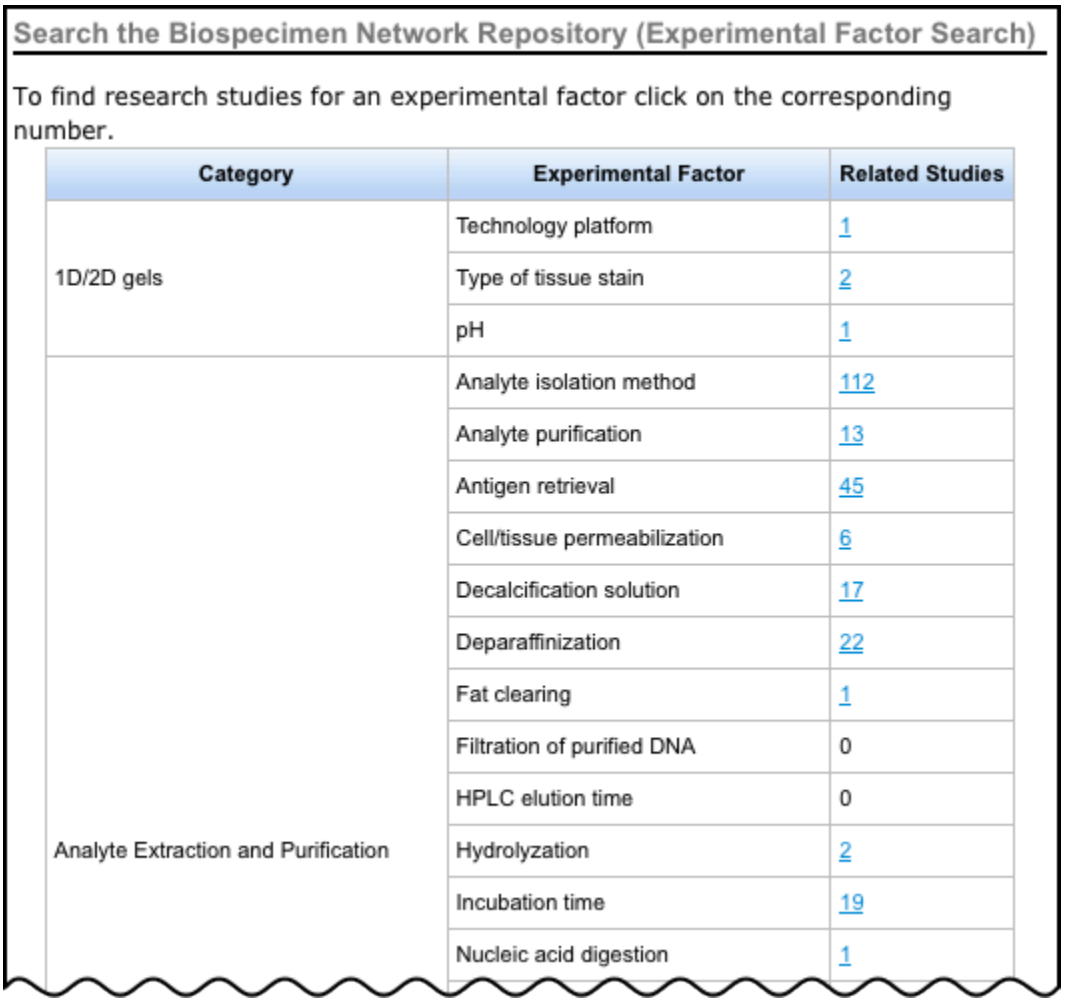
Search Clear Cancel

Quick Search Simple Search

Experimental Factor Search Overview

An experimental factor search allows you to find research studies corresponding to an experimental factor. Experimental factors are organized on the page by category. The number link represents all of the research studies in the BRD for the corresponding experimental factor listed in the row. For more information, see Conduct an Experimental Factor Search.

> **Note**
> If a study you are looking for appears to be missing, you can suggest a new paper.



Search the Biospecimen Network Repository (Experimental Factor Search)

To find research studies for an experimental factor click on the corresponding number.

Category	Experimental Factor	Related Studies
1D/2D gels	Technology platform	1
	Type of tissue stain	2
	pH	1
Analyte Extraction and Purification	Analyte isolation method	112
	Analyte purification	13
	Antigen retrieval	45
	Cell/tissue permeabilization	6
	Decalcification solution	17
	Deparaffinization	22
	Fat clearing	1
	Filtration of purified DNA	0
	HPLC elution time	0
	Hydrolyzation	2
	Incubation time	19
	Nucleic acid digestion	1

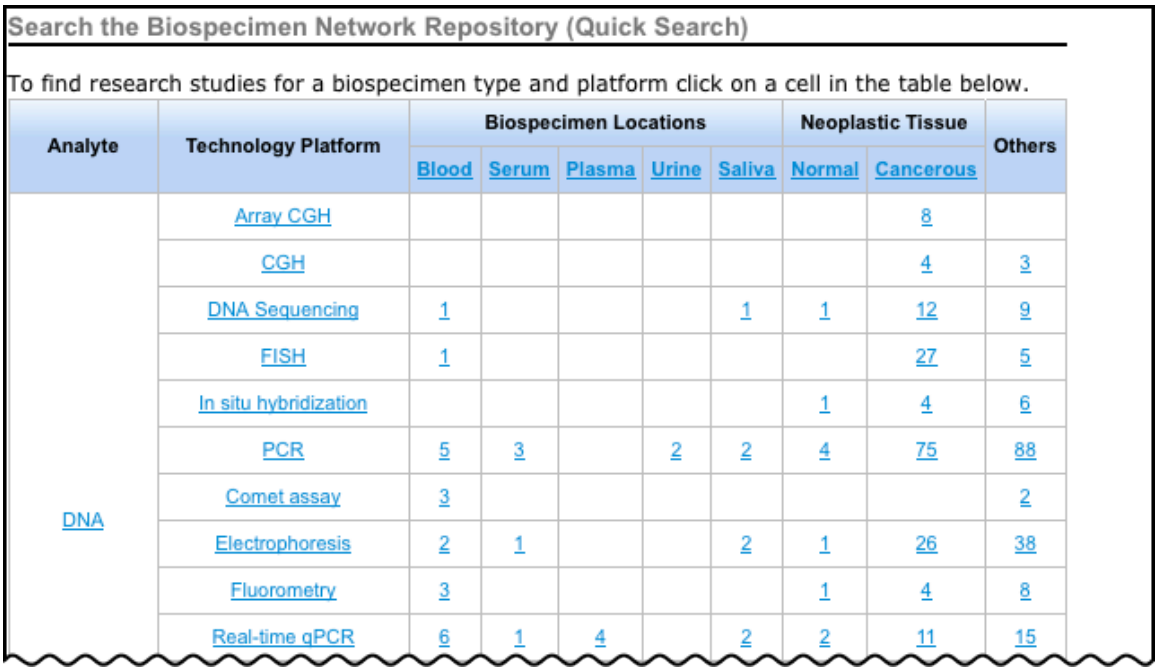
Conduct a Quick Search

A quick search provides easy access to specimen research data on some commonly used specimen types and analytical platforms. To search the Biospecimen Research Database for more specimen types and analytical platforms than presented in a quick search, conduct a simple or an advanced search by clicking the respective link under the quick search display.

To conduct a quick search

1. On the Biospecimen Research Database home page, click the **Quick Search** link. The Quick Search page appears.

> **Note**
> If you do not see the Quick Search page table, click the **Quick Search** link at the bottom of the page.



Search the Biospecimen Network Repository (Quick Search)

To find research studies for a biospecimen type and platform click on a cell in the table below.

Analyte	Technology Platform	Biospecimen Locations					Neoplastic Tissue		Others
		Blood	Serum	Plasma	Urine	Saliva	Normal	Cancerous	
DNA	Array CGH							8	
	CGH							4	3
	DNA Sequencing	1				1	1	12	9
	FISH	1						27	5
	In situ hybridization						1	4	6
	PCR	5	3		2	2	4	75	88
	Comet assay	3							2
	Electrophoresis	2	1			2	1	26	38
	Fluorometry	3					1	4	8
	Real-time qPCR	6	1	4		2	2	11	15

2. To search the database, click a link in the table.

Click a link in the...	To see...
Analyte column	All research studies in the database that involve that analyte
Technology Platform column	All research studies in the database that involve both that technology platform and the analyte in the same row
Biospecimen Locations columns	All research studies in the database that involve that biospecimen location
Neoplastic Tissue columns	All research studies in the database that involve the specified type of neoplastic tissue
Others column	All research studies in the database that do not fit into the categories mentioned in this table
Body of the table	All research studies in the database that involve the unique combination of analyte, technology platform, biospecimen location, and neoplastic tissue, as applicable to the table cell you selected. The numerical link corresponds to the number of research studies that fulfill the search criteria combination. **Note** The numerical links do not add up to the total number of studies in the database. Each cell represents only the number of studies that meet the specified search criteria in this table. Many other search criteria can be accessed by conducting a Simple or an Advanced Search.

Studies that match all of the criteria you selected appear on the Search Results page. See Interpret Search Results for more information.

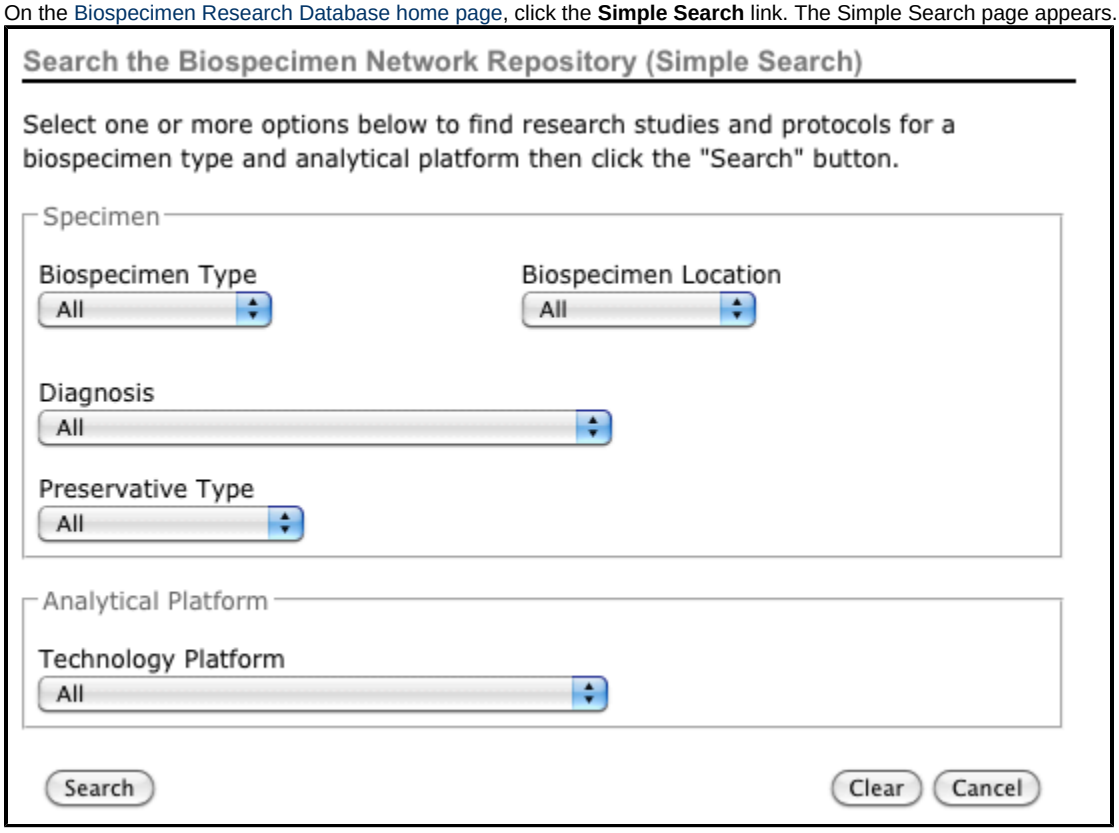
Conduct a Simple Search

Using a simple search, you can quickly retrieve results from the Biospecimen Research Database using some common search criteria.

Note
When specifying search criteria in the Biospecimen Research Database, there are no required fields. You can add as much detail or only those criteria that you consider essential to the search.

To conduct a simple search

1. On the Biospecimen Research Database home page, click the **Simple Search** link. The Simple Search page appears.



2. Select one or more fields from the lists. The more fields you select, the more you narrow your search; studies that appear in the search results match all of the criteria you select. The following table describes the available search criteria:

Basic Search Criteria	Description
Specimen	
Biospecimen Type	Select the type of the biospecimen (Tissue/Fluid/Cell).
Biospecimen Location	Select the bodily location from which the biospecimen was obtained.
Diagnosis	Select the term that identifies the nature of a disease or condition associated with the biospecimen.
Preservative Type	Select the substances added to the biospecimen, or other treatment to protect it from chemical change or microbial action.
Analytical Platform	
Platform	Select the specific technology used to analyze the biospecimen.

3. Click the **Search** button. Studies that match the criteria you selected appear on the Search Results page. See Interpret Search Results for more information.

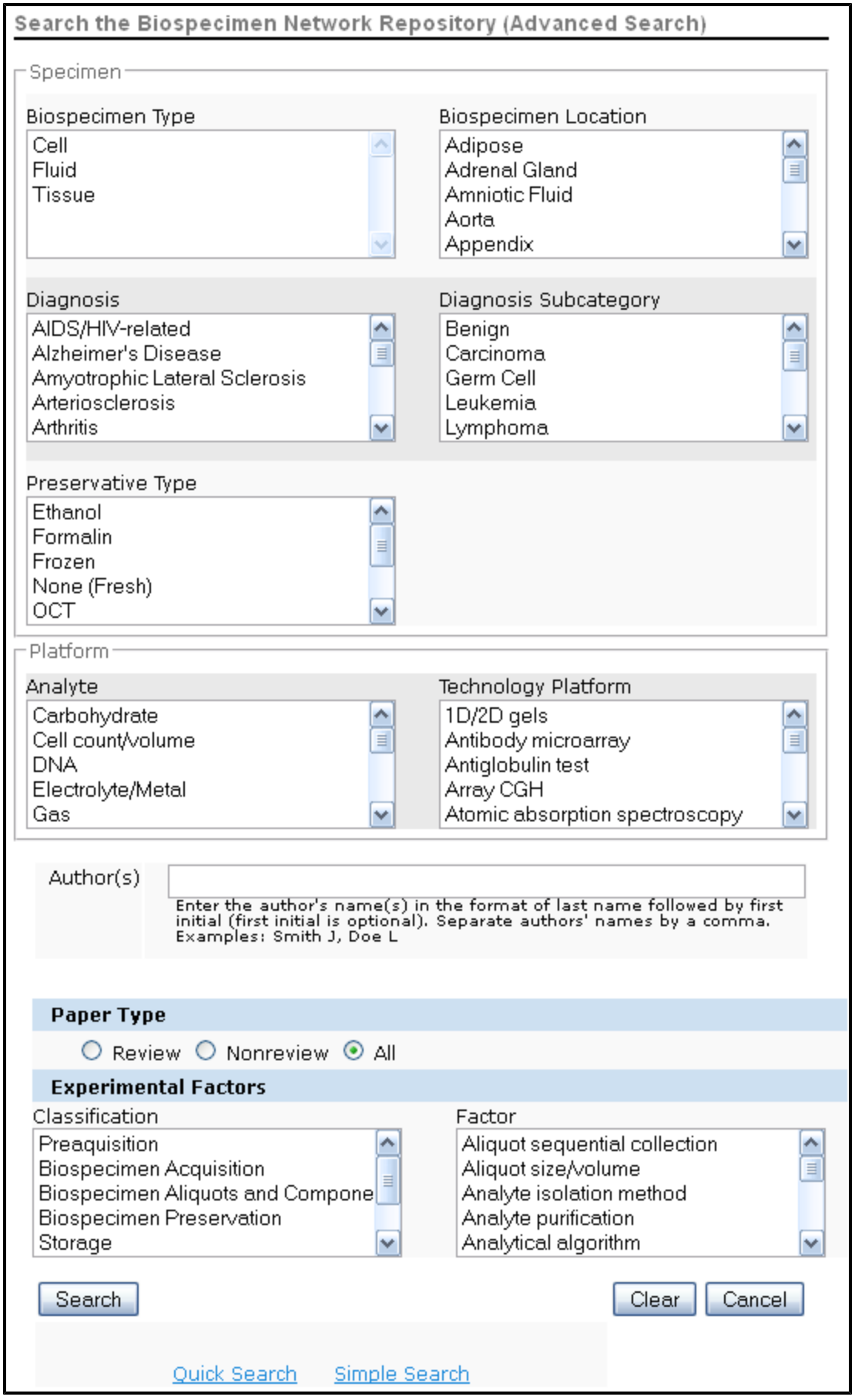
Conduct an Advanced Search

An advanced search of the Biospecimen Research Database provides you with more control over search criteria and results than a quick or simple search.

Note
When specifying search criteria in the Biospecimen Research Database, there are no required fields. You can add as much detail or only those criteria that you consider essential to the search.

To conduct an advanced search

1. On the Biospecimen Research Database home page, click the **Advanced Search** link. The Advanced Search page appears.



2. Select search criteria by clicking fields in the scroll boxes.

- To select multiple fields in the same scroll box, click the first field, press and hold the CTRL key, and then click additional fields. The fields you select are highlighted and your search results contain all studies matching any of the fields. For example, if you select both the Cell and Fluid biospecimen types, your search results contain all studies that concern either cells or fluid.
- When you select fields from different search scroll boxes, you narrow your search. For example, if you select the Cell biospecimen type and the Kidney biospecimen location, your search results include studies that concern both cells and kidneys.

> **Note**
> Note that the selections you make in the scroll boxes on the left determine the selections in the scroll boxes on the right. For example, selecting the Biospecimen Type “Fluid” makes “Blood” an available Biospecimen Location.

The following table describes the advanced search criteria.

Advanced Search Criteria	Description
Specimen	
Biospecimen Type	Select the type of biospecimen (Tissue/Fluid/Cell).
Biospecimen Location	Select the bodily location from which the biospecimen was obtained.
Diagnosis	Select the term that identifies the nature of a disease or condition associated with the biospecimen.
Diagnosis Subcategory	Select the diagnosis subdivision that differentiates the disease within the larger category. **Note** Diagnosis Subcategory is only available for the diagnosis "neoplastic.”
Preservative Type	Select the substances added to the biospecimen, or other treatment to protect it from chemical change or microbial action.
Platform	
Analyte	Select the molecular analyte (DNA, RNA, Protein) derived from the biospecimen, or "Morphology" for microscopic analysis.
Technology Platform	Select the specific technology used to analyze the biospecimen.
Author(s)	Enter the author's name(s) in the format of last name followed by first initial (first initial is optional). Separate authors' names by a comma. Use " * " as wildcard. Examples: Smith J, Doe L
Paper Type	Select among the paper type options: Review, Nonreview, or All. If you do not select any search criteria prior to clicking the Search button, the search uses Paper Type: All as its default search criterion.
Experimental Factors	
Classification	The type of biospecimen handling variable that is the subject of the study (pre-acquisition, post-acquisition, or platform specific)
Factor	The specific experimental factor that is the subject of the study (e.g., the post-acquisition variable, "type of fixative," is a specific experimental factor in a study that examines the effects of different types of tissue fixatives on molecular analysis).

3. Click the **Search** button. Studies matching your search criteria appear on the Search Results page. See Interpret Search Results for more information.

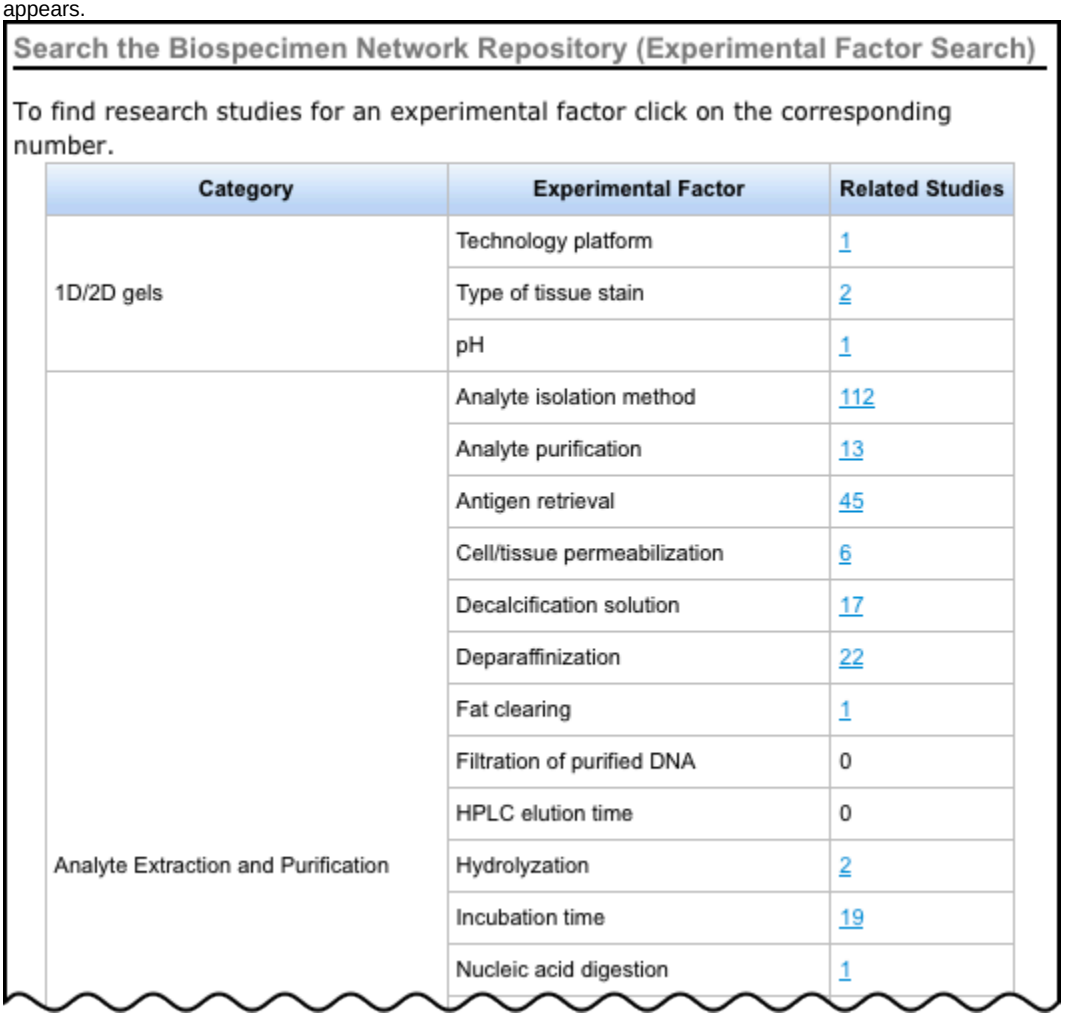
Conduct an Experimental Factor Search

An experimental factor search allows you to find research studies corresponding to an experimental factor.

To conduct an experimental factor search

1. On the Biospecimen Research Database home page, click the **Experimental Factor Search** link. The Experimental Factor Search page

appears.



Search the Biospecimen Network Repository (Experimental Factor Search)

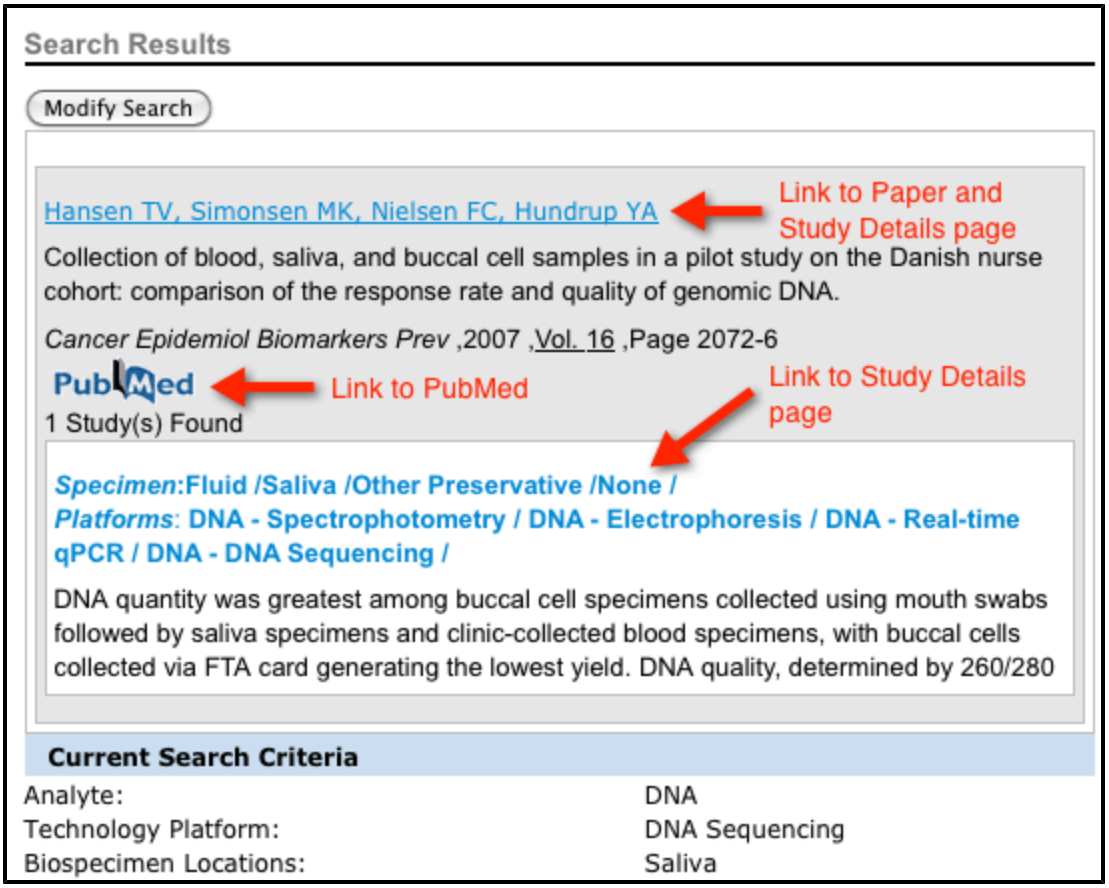
To find research studies for an experimental factor click on the corresponding number.

Category	Experimental Factor	Related Studies
1D/2D gels	Technology platform	1
	Type of tissue stain	2
	pH	1
Analyte Extraction and Purification	Analyte isolation method	112
	Analyte purification	13
	Antigen retrieval	45
	Cell/tissue permeabilization	6
	Decalcification solution	17
	Deparaffinization	22
	Fat clearing	1
	Filtration of purified DNA	0
	HPLC elution time	0
	Hydrolyzation	2
	Incubation time	19
	Nucleic acid digestion	1

2. Click a number link in the Related Studies column that corresponds with the experimental factor in which you are interested. Studies matching your selection appear on the Search Results page. See Interpret Search Results for more information.

Interpret Search Results

Searches of the Biospecimen Research Database result in a list of all studies and relevant paper(s) matching your search criteria on the Search Results page. Each study addresses a specific experimental question, and a single paper is often associated with more than one study. If you clicked the Search button not having defined any search criteria, all studies in the database appear on the page.



On the Search Results page, you can:

- View a summary of all of the studies matching your search criteria.
- Click the author(s) hyperlink to view detailed information about the paper stored in the Biospecimen Research Database.
- Click PubMed to view that paper's listing in PubMed in a new browser window.
- Click **Modify Search** to return to the search page and search criteria you last used.

View Paper Details

Clicking the author(s) link on the Search Results page opens the Paper and Study Details page, where you can view a paper's entire record, as shown below.

Search Results

Paper and Study Details

PubMed ID: 12466110 PubMed

Srinivasan M, Sedmak D, Jewell S

Effect of fixatives and tissue processing on the content and integrity of nucleic acids.

Am J Pathol, 2002, Vol. 161, Page 1961-71

Review Paper?	Yes
Purpose of Paper:	The goal of this review is to highlight key variables during biospecimen procurement and preservation that impact specimen quality and thereby subsequent molecular analysis.
Conclusion of Paper:	The authors highlight parameters associated with biospecimen procurement and handling that impact subsequent molecular analyses including preacquisition, fixation, and storage variables.

Studies

Detail

Specimen:	Tissue / Breast / Formalin / Normal / Neoplastic - Normal Adjacent / Neoplastic - Lymphoma / Neoplastic - Carcinoma /
Platform:	DNA - Southern blot / DNA - PCR / DNA - In situ hybridization / DNA - DNA Sequencing / RNA - Electrophoresis / RNA - Northern blot / RNA - RT-PCR / RNA - In situ hybridization / RNA - DNA Microarray / Morphology - Light Microscopy / Protein - Immunohistochemistry /
Findings :	Of note, data from both human and animal model studies are presented and discussed in the present review. Some key findings noted include the following. Extensive mRNA and protein degradation have been observed among autopsy specimens and is dependent upon the duration of the postmortem interval. The type of anesthia administered during surgical resection may induce molecular and biochemical changes within a biospecimen, as can alterations in the in situ environment, such as 10 minutes of anoxia induced by surgical clamping. Parameters influencing the subsequent molecular analysis of fixative preserved biospecimens was also discussed, including effects specific to the type, concentration, temperature, and pH of the fixative employed. Biospecimen storage temperatures and media, as well as their effect on subsequent moleuclar analyses were also discussed.

Each paper includes one or more associated studies. Studies are defined as the set(s) of experiments within a paper that vary specific experimental factors or use experimental platforms for analysis. For example, a paper that examines the effect of a biospecimen handling variable

on RNA and protein analysis may have two studies in the database, one study describing the results of RNA analysis and one describing the results of protein mass spectroscopy analysis. Additional study details are available on the Study Details page.

On the Paper and Study Details page, you can:

- View complete bibliographic information about the paper.
- Click  to view that paper's listing in PubMed in a new browser window.
- View whether the paper is a Review or Nonreview paper.
- View the purpose of the paper.
- View the conclusion of the paper.
- View a summary of the paper's associated studies.
- Click the **Detail** link to the left of a study summary to view additional study details.

View Study Details

Clicking the **Detail** link to the left of a study summary on the Paper and Study Details opens the Study Details page, where you can view the most detailed information about a study that is available in the Biospecimen Research Database.

The following information appears on the Study Details page, which is shown below.

- Study purpose
- Information about specimen type and location
- Platform type studied
- Analyte studied
- Experimental Factors
- Study Findings

Paper Details

Study Details

PubMed ID: 12466110 PubMed

Srinivasan M, Sedmak D, Jewell S

Effect of fixatives and tissue processing on the content and integrity of nucleic acids.

Am J Pathol, 2002, Vol. 161, Page 1961-71

Review Paper? Yes

Study Purpose

The goal of this review is to highlight key variables during biospecimen procurement and preservation that impact specimen quality and thereby subsequent molecular analysis.

Specimen

Biospecimen Type: Tissue

Biospecimen Location: Breast

Diagnoses:
- Normal
- Neoplastic - Normal Adjacent
- Neoplastic - Lymphoma
- Neoplastic - Carcinoma

Preservative Type: Formalin

Platform

Analyte	Technology Platform
DNA	Southern blot
DNA	PCR
DNA	In situ hybridization
DNA	DNA Sequencing
RNA	Electrophoresis
RNA	Northern blot
RNA	RT-PCR
RNA	In situ hybridization
RNA	DNA Microarray
Morphology	Light Microscopy
Protein	Immunohistochemistry

Experimental Factors

Classification	Factor	Value(s)
Biospecimen Preservation	Type of fixation/preservation	Acetone Carnoy's solution Ethanol

		Formalin (buffered) Genipin Glutaraldehyde HOPE Methacarn
Biospecimen Preservation	Time in fixative	Multiple durations addressed
Storage	Storage temperature	Room temperature 4 degrees C -20 degrees C -80 degrees C -132 degrees C
Biospecimen Acquisition	Biospecimen location	Skin Lung Breast Gut Liver Kidney
Preaquisition	Postmortem interval	Multiple durations addressed

Summary of Findings

Of note, data from both human and animal model studies are presented and discussed in the present review. Some key findings noted include the following. Extensive mRNA and protein degradation have been observed among autopsy specimens and is dependent upon the duration of the postmortem interval. The type of anesthia administered during surgical resection may induce molecular and biochemical changes within a biospecimen, as can alterations in the in situ environment, such as 10 minutes of anoxia induced by surgical clamping. Parameters influencing the subsequent molecular analysis of fixative preserved biospecimens was also discussed, including effects specific to the type, concentration, temperature, and pH of the fixative employed. Biospecimen storage temperatures and media, as well as their effect on subsequent moleuclar analyses were also discussed.

Paper Details

On the Study Details page, you can:

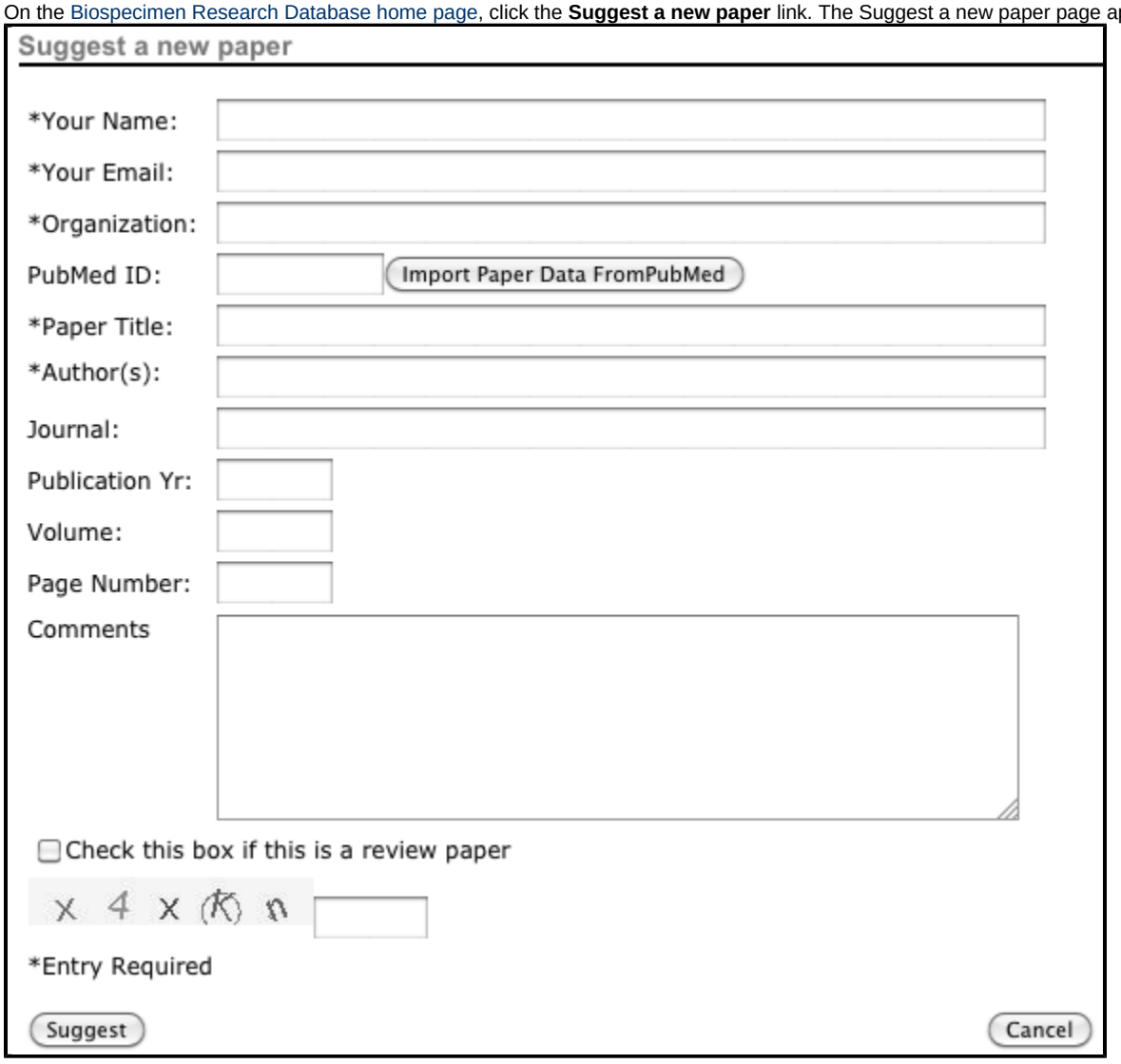
- View complete bibliographic information about a paper.
- View whether the paper is a Review or Nonreview paper.
- Click PubMed to view the paper's listing in PubMed in a new browser window.
- Return to the Paper and Study Details page, which lists all of the studies and papers that met your original search criteria, by clicking **Paper Details**. For more information, see View Paper Details.

Suggest a New Paper

If you know of a paper that would be a useful addition to the Biospecimen Research Database, you can suggest it. Curators will add accepted papers to the database.

To suggest a new paper

1. On the Biospecimen Research Database home page, click the **Suggest a new paper** link. The Suggest a new paper page appears.



2. If the paper is already in PubMed, enter the PubMed ID in the PubMed ID field and click **Import Data from PubMed**. This populates all of the required fields.
3. If the paper is not in PubMed, enter the following required information about yourself and the paper in the relevant fields: your name, email address, and organization and the paper's title and author(s).
4. Optionally, enter the journal name, publication year, volume, page number, and comments about your suggestion in the relevant fields.
5. Optionally, check the box at the bottom of the page if the paper is a Review paper.
6. In the box to the right of the challenge characters, enter the letters or numbers exactly as you see them.
7. Click **Suggest**.